

## Lab scientist saves Air Force \$100 million in costs

by Jeffrey Pearce, *Propulsion Directorate*



*Dr. Chi Tsieh Liu*

WRIGHT-PATTERSON AFB, OHIO — Dr. Chi Tsieh Liu, a member of the Propulsion Directorate's Propulsion Materials Application Branch recently received the Harold Brown Award. Carol Di Battiste, the Under Secretary of the Air Force, presented the award at a January ceremony at the Pentagon.

The award recognized Liu's research in solid propellant fracture mechanics and service-life predictions. Using techniques he developed to verify the viability of contaminated propellants in several Titan IV motor segments, his efforts saved the Air Force at least \$100 million in launch delays and motor manufacturing costs.

The award, which is named for a former Secretary of the Air Force, recognizes significant achievement in research and development by a person who led to, or demonstrated the promise of, a substantial improvement in the operational effectiveness of the Air Force. @